Civil Services

CHRONICLE

THE NO. 1 MAGAZINE FOR IAS ASPIRANTS SINCE 1990

1994-2022 **(29 Years)**
UPSC Civil Services Prelims

TOPIC-WISE SOLVED PAPERS

GENERAL STUDIES

PAPER-I

USEFUL FOR UNION AND STATE PUBLIC SERVICE COMMISSION EXAMINATIONS

UPSC 29 YEARS GENERAL STUDIES Solved Papers
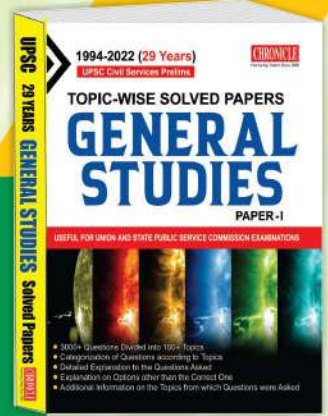
Public Policies & Welfare Schemes

- Socio-economic Development
- Economy • Science and Technology
- Ecology and Environment

An exam-oriented comprehensive compilation of Policies, Programmes and Schemes in news during 2021-22

Tete-a-Tete with
Utkarsh Dwivedi
CSE 2021 (Rank 5)

Articles

- ☑ **Conservation of Coastal Ecosystems in India**
- ☑ **Cooperatives: Crucial for Making India Self-reliant**
- ☑ **Energy Security in India**
- ☑ **India's Bioeconomy: An Untapped Treasure**
- ☑ **Preserving Progress on Nutrition in India**
- ☑ **State of the Education Report for India**
- ☑ **Global Innovation Index 2022**
- ☑ **United in Science 2022 Report**

Interview with Shraddha Shukla
Rajasthan Judicial Services
Examination, 2021 (15th Rank)

INSIDE →

Public Policies & Welfare Schemes

- **SOCIO-ECONOMIC DEVELOPMENT**
- **ECOLOGY AND ENVIRONMENT**
- **ECONOMY**
- **SCIENCE AND TECHNOLOGY**

83

Interview

Interview

Articles

In Focus

REGULAR COLUMNS

The **Current Affairs based MCQs** of the November 2022 Issue of Civil Services Chronicle Magazine is available at **www.chronicleindia.in** under the **Free Resources** section

Tete-a-Tete

with
Utkarsh Dwivedi
CSE 2021 (Rank 5)

Utkarsh Dwivedi, AIR 5, CSE 2021, is an epitome of motivation for many civil service aspirants who dream of becoming an IAS officer despite the hurdles. Presenting to you here is an interview with Mr. Ayush Sinha, founder and director of Forum IAS and Utkarsh Dwivedi.

Ayush: *Utkarsh, a very warm welcome to you and congratulations for securing Rank 5 in CSE 2021. What was your reaction when you saw the results of CSE 2021? Also, what were you doing in Haridwar when the results came in?*

Utkarsh: Thank you sir. Initially, I was happy and later, the excitement subsided as reality set in that it is time for responsibility. This was my third attempt of CSE and every time I failed, I had no one except my mother to cry about it. So, I went to my relative's place in Haridwar so that I may not be alone if something were to go wrong again.

Ayush: *Please tell us about your education and family background.*

Utkarsh: My family includes my parents and a younger sibling. I have had school education from all across the country and later pursued Mechanical Engineering from VIT, Vellore. I came to Delhi in 2018 for CSE preparation right after I finished my graduation.

Ayush: *What are your thoughts on people starting their CSE preparation during second and/or third year of graduation?*

Utkarsh: Though I started my formal preparation after graduation, the informal one started in college itself. It good that people become clear as to what they have to do in life but it is equally important to enjoy the college life instead of missing out on the days later.

Ayush: *What was your strategy for the preparation of Prelims? What study sources did you refer to?*

Utkarsh: I wrote a lot of tests. In fact I have been a part of Forum IAS's Prelims Test Series ever since my first year of preparation. I have also recommended to lot of my friends. UPSC is not only about knowing everything; there will be times when one will have to work on their intuition to get an answer right. I stuck to limited reading sources like NCERT, spectrum, Laxmikant. I joined Forum for test series and by the time I appeared for the exam, I had already solved more than 10,000 questions.

Ayush: *Unlike the trend where students buy test series during their second attempt of CSE preparation, why did you take the subscription in the first year itself?*

Utkarsh: Solving questions at Forum helped me realize the areas I needed to work on. Therefore, taking test series is way more beneficial than going for market-available test papers where you can just know the score.

Ayush: *Despite solving number of test papers, students score somewhere between 60-70 marks. Since you have cleared Mains thrice, what in your opinion are the mistakes these students must have been making?*

Utkarsh: Solving questions is just one portion of the preparation; analysis of the answers is the second one. One needs to analyse the correct as well as the incorrect options to dig dipper into the topic and to avoid repeating mistakes during the next attempt. This approach also helps in option elimination in case of MCQs.

Ayush: *How many questions did you attempt for the prelims?*

Utkarsh: I attempted more than 90 questions because attempting less questions does not take one too far as the paper has become more dynamic and unpredictable.

Ayush: *How did you deal with CSAT since it has become a disqualifying paper for many students?*

Utkarsh: I myself scored much less than what I scored in 2020 and the year prior to that. In my opinion, it is best to solve all the previous years' papers right from 2013 till date and join some program for practice. In areas like logical reasoning and maths, one should make notes on the tricks that would save time.

Ayush: *One month before the prelims, how did your day look like?*

Utkarsh: I used to give tests from morning till afternoon and kept the evenings for revision. I used to get good sleep, and often talked with friends to refresh my mind. I would suggest people to solve previous years' papers in the last week. This will orient the brain to the actual examination pattern.

Ayush: *Which newspaper did you read and how much did you struggle in notes' making?*

Utkarsh: I was always habitual of reading newspaper right from my college days. I read 3 newspapers, viz., *The Hindu*- Complete, *The Indian Express*- Editorial and explain page, and *The Mint*- primer, long story and editorial. Reading the newspaper helps in the Mains as well as during the interview.

Ayush: *Did you digitalize the notes or had hard copies for them?*

Utkarsh: I made hand-written notes during my first attempt. Later, I digitalized the notes using *Evernote*.

Ayush: *Did you have a specific hack for organizing your notes on Evernote?*

Conservation of Coastal Ecosystems in India: Imperatives & Implications

Marine resources from Indian Ocean can serve as the backbone of India's economic growth. Blue economy, through sustainable use of oceans, has great potential for boosting the economic growth of India.

■ **Satish Kumar Karna**

Recently the first National Conference on Sustainable Coastal Management in India was held in Bhubaneswar, Odisha. It was focused on enhancing climate resilience of India's coastal communities and discussion on steps that shall be taken towards coastal management.

It brought together officials from all 13 coastal states of India under one roof to focus on the three interrelated themes of coastal and marine biodiversity, climate mitigation and adaptation and coastal pollution.

Coastal Ecosystem

- The coastal ecosystems occur where the land meets the sea and that includes a diverse set of habitat types like the mangroves, coral reefs, seagrass beds, estuaries and lagoons, backwaters, etc.
- These ecosystems provide a wide range of services for the welfare of humans both directly and indirectly that includes:
  - Provisioning services (fisheries);
  - Regulating services (carbon sequestration, prevention of erosion, moderation of extreme events);
  - Supporting services (element and nutrient cycling); and
  - Cultural services (tourism and recreational).
- The quality of the ecosystem services depends on the resilience of the ecosystems.

Significance of Coastal Ecosystem for India

- Coastal ecosystem in India is important for managing the coasts, and all the other aspects including geographical and political boundaries, to achieve sustainability.
- India has an Exclusive Economic Zone (EEZ) of 2.02 million sq. km and a long coastline of 8,118 km with rich and diverse marine living resources.
- Robust coastal ecosystem is critical for utilizing these resources efficiently leading to inclusive growth.

Geographical

- The Indian coastline is of immense strategic, economic and social importance to the country.
- It is the seventh longest in the world, and is home to 20 per cent of the country's population.
- Indian coastline touches nine states namely Gujarat, Maharashtra, Goa, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Odisha, West Bengal and two Union Territories– Daman and Diu and Puducherry.
- The two island territories of India are– Andaman and Nicobar Islands in the Bay of Bengal and Lakshadweep Islands in the Arabian Sea.
- Three of our four metropolitan cities lie on the coast.
- These support a great diversity of ecosystems with more than 17,000 species of plants and animals.
- However, these coastal regions face the threat of climate change in form of coastal erosion. This also impacts the human population around the coast.

Economic

- **Enhancing Coastal Resource Efficiency and Utilization**
  - Indian Ocean contain vast amount of minerals, including the cobalt, zinc, manganese and rare earth materials.
  - These minerals are needed for electronic industry for manufacturing smart phones, laptops and car components, etc.
  - Seawater also contains economically useful salts such as common salt.
  - Gypsum is useful in various industries. This would help 'Make in India' initiative.
- **Pisciculture**
  - Marine fisheries wealth around Indian coastline is estimated to have an annual harvestable potential of 4.4 million metric tonnes.
  - Through infrastructure development coastal management would provide a boost to fishery sector.
- **Decentralized Governance**
  - Coastal ecosystem is important to build collective capacity of communities and will enhance decentralized governance for adopting and implementing integrated coastal management approaches.

Energy Security in India
Ensuring Access to Affordable, Reliable and Sustainable Energy for All

There is huge potential for further growth in energy demand in India due to an expanding economy and the forces of urbanisation and industrialisation. There are, however, critical questions about how demand growth will be met and energy security will be ensured.

■ **Chandrakant Singh**

As per **India Energy Outlook 2021**, published by **International Energy Agency (IEA)**, India has been ranked **third** largest primary energy consumer in the world.

Also, World Energy Outlook 2021 states that India's current share in global primary energy consumption is **6.1%** and is likely to increase to about **9.8%** under stated policies scenario by 2050.

Thus, there will be huge energy demand in India due to an expanding economy and the forces of urbanisation and industrialisation. This will generate the concern of **ensuring access to Affordable, Reliable and Sustainable Energy for All.**

India's Energy Demand

Since 2000, India has been responsible for more than **10% of the increase** in global energy demand. On a per capita basis, energy demand in India has grown by more than 60% since 2000. However, there are widespread differences across different parts of the country as well as across socio-economic groups.

Also, despite India being one of the world's largest energy users, Indians on an average still consume significantly less than their counterparts elsewhere in the world, and much less than in advanced economies.

Energy Security

12th Five-Year Plan defines energy security in the following manner:

"Energy security involves ensuring uninterrupted supply of energy to support the economic and commercial activities necessary for sustained economic growth."

India has coal, oil and gas constraints and it imports all these resources from other nations. So, energy security is obviously more difficult to ensure.

Energy Scenario in India: What has changed since 2015?

In the **six years** since the last India Energy Outlook was published, India's GDP has grown at an annual average rate of 6.7%.

Electricity: Over the last decade, India has provided electricity to nearly **50 million** new users every year, equal to the entire population of Spain. This is one of the most significant achievements in global energy in recent years. However, issues of reliability remain.

Solar: In 2019, India added nearly five times as much solar capacity as it did in 2015. A key driver of this has been the global decline in costs.

Energy Efficiency: India has also made some significant progress on energy efficiency policy. The commercial building **Energy Conservation Building Code** was revised and strengthened in 2017, and Eco-Niwas Samhita, the energy conservation code for residential buildings, was launched in 2018. The existing industrial efficiency programme was expanded to include additional consumers and targets, and new appliances were added under the standards and labelling programme.

Hydrocarbon: Despite a new policy for hydrocarbons exploration and production, domestic production of natural gas has been lower, while demand growth has been marginally higher. India is emerging as a bigger player in global gas markets, with the industry expecting India to absorb a large part of LNG supply growth.

Coal: The share of coal in the energy mix has not really changed since 2015. The tremendous growth in renewables has tempered growth in coal capacity, but not prevented it. The rise in installed coal-fired capacity was in fact higher than that of solar and wind over the **2015-19 period** (58 gigawatts coal thermal capacity installed versus 49 GW solar and wind), although renewables have outpaced coal-fired capacity additions since 2017, and there have also been a number of cancellations in the pipeline of approved coal projects.

India's Bioeconomy: An Untapped Treasure

As the world witnesses climate change, the drive towards sustainable development is no longer an alternative, it is a necessity. Bioeconomy can help to achieve development in an environment-friendly manner and be a solution for societal challenges. India's bioeconomy, valued at over USD 80 billion in 2021, is expected to reach USD 300 billion by 2030. Thus, India can reap the benefits of bioeconomy provided it overcomes the constraints and works with fullest potential.

■ **Deepika Singla**

Recently, India Bioeconomy Report 2022 was released by Biotechnology Industry Research Assistance Council (BIRAC). As per the report, India's bioeconomy is likely to touch USD 150 billion in 2025 and over USD 300 billion by 2030.

Bioeconomy can have multiplier effect on overall economic growth and self-reliance capacity of the country as it has the potential to solve a myriad of problems the country is witnessing in the fields of health, food, water, fossil fuel crisis and climate change.

What is Bioeconomy?

Bioeconomy or bio-based economy is sustainable use of renewable biological resources to produce food, energy, products and services. It is about exploiting the untapped potential of biological waste and residual materials.

As per the Global Bioeconomy Summit 2020 held in Berlin, "the production, utilization, conservation, and regeneration of biological resources, including related knowledge, science, technology, and innovation, to provide sustainable solutions (information, products, processes and services) within and across all economic sectors and enable a transformation to a sustainable economy" is defined as bioeconomy.

Increasing population, growing consumerism, demand for energy and goods, mounting waste generation, environmental and climatic change issues, etc. are some of the key drivers which necessitate the development of bioeconomy.

Segments of Bioeconomy

Bio-Pharma: Its key constituents include Therapeutics, Biologics and Biosimilars, Vaccines, and Diagnostics.

➢ The Covid Bioeconomy has been tracked under two sub-categories—Covid-19 Vaccines and Covid-19 Testing / Diagnostics. These two sub-categories have been excluded from the measurement of Bio-Pharma Economy.

Bio Agriculture: It comprises of Bt cotton, biopesticides, biostimulants, and biofertilizers.

Bio Industrial: It is categorized into two verticals—(i) Biofuels or Bioenergy and (ii) Industrial Enzymes.

Bio IT and Research Services: It includes Artificial Intelligence, Big Data, Computationally intensive Bioinformatics, Biostatistics, Systems Biology, Genomics, Proteomics, Contract Research, Clinical Research, Drug Discovery and Drug Development and manufacturing services including clinical data management.

Current Status of India's Bioeconomy

Growth & Contribution to GDP

➢ The Indian bioeconomy is estimated at $80.12 billion in 2021 registering 14% growth over 2020.

➢ Indian bioeconomy accounted for approximately 2.6 per cent of India's GDP in 2021.

➢ India is among the top 3 in South Asia and the top 12 destinations for biotechnology in the world, with approximately a 3% share in the global biotechnology industry.

Contribution of Different Sectors to Bioeconomy

Bio-Pharma

➢ Bio-Pharma is the highest contributing segment to the Indian bioeconomy, accounting for 49 percent share of the total value.

➢ Within the Bio-Pharma, the share of vaccines stood at 22 per cent, therapeutics accounted for 26 per cent and diagnostics was at 52 per cent.

➢ India is a global leader in the supply of DPT, BCG, and measles vaccines.

Covid Bioeconomy

➢ The Covid-19 bioeconomy was $14.56 billion in 2021.

➢ For the Covid vaccine the nation has demonstrated self-sustenance and also supported several countries.

Bio Agriculture

➢ Bio-agriculture contributed to $10.48 billion in 2021 for bioeconomy of the country.

➢ Bt cotton, accounting for 92% share of total Bio-Agri economic value is an important constituent of Bio-Agri segment.

➢ Biofertilizers, biopesticides, and biostimulants together contributed $860 million.

Cooperatives:
Crucial for Making India Self-reliant

India will become the third-largest economy in the world by the end of the decade, with the cooperative sector playing a pivotal role. The government will help to set up two lakh new dairy cooperatives at the village level before the 2024.

■ **Sharmila Senthil Kumar**

On 6th September, 2022 the Central Government announced the constitution of a 47-member committee, headed by former Union Cabinet Minister Suresh Prabhakar Prabhu, for drafting the National Cooperation Policy document. The new National Cooperative Policy is being formulated to realise the government's vision of 'Sahakar Se Samriddhi'.

The constitution of the committee was announced by the Union Home and Cooperation Minister Amit Shah. The Minister urged the States and the Union Territories (UTs) to pursue the cooperative movement forward in the spirit of team India. In order to build a strong cooperative movement, he also emphasised the necessity of strengthening Primary Agricultural Credit Societies (PACS).

The Committee comprises experts of the cooperative sector; representatives of national/state/district and primary cooperative societies; secretaries (cooperation) and registrars of cooperative societies of states/UTs; and officers from central ministries / departments.

A few important cooperative sectors remained excluded from the list and these included cooperatives active in the field of Tribal, Labour, Fisheries, Housing, etc. Most importantly, the committee has no women member on its roll.

Current Status of Cooperative Societies in India

In India there are 85 million cooperative societies of all kinds with membership of 290 million covering almost 100% of villages and 30% national population in membership. About 17 national cooperative societies, 390 state level federations, 2705 district federations and 97961 Primary Agricultural Societies (PACS) leading and guiding the cooperative movement of the country. There is no sphere of economic activity which is left untouched by Cooperation.

The registered cooperative societies are especially in agricultural, banking and housing sectors. In the agriculture sector, cooperative dairies, sugar mills, etc., are formed to process and sell the pooled produce of farmers. India has approximately 194 cooperative dairy societies and 330 cooperative sugar mill operations. In addition, cooperative sugar mills account for 35% of the sugar production in the country.

In the banking and finance sector, cooperative institutions are spread across rural and urban areas. The cooperative credit system of India has the largest network in the world and cooperatives have advanced more credit in the Indian agricultural sector than commercial banks.

The village cooperative societies provide strategic inputs for the agricultural sector, consumer societies meet their consumption requirements at concessional rates; marketing societies help the farmer to get remunerative prices and cooperative processing units help in value additions to the raw products, etc.

In addition, cooperative societies are helping in building up of storage godowns including cold storages, rural roads and in providing facilities like irrigation, electricity, transport, and health.

Various development activities in agriculture, small industry marketing, and processing, distribution and supplies are now carried on through cooperatives.

What is a Cooperative Society?

A Cooperative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.

A cooperative society is an organization owned and run by the people and for the people using its goods and services. As the name suggests, the people or members of the organization work in cooperation to pool resources for their common benefit and progress.

Formation of Cooperative Society

The cooperative society is mentioned under the State List of the seventh schedule and is mentioned under Part IX-B of the Constitution of India.

Since the cooperative society is enlisted under the State List, the State Legislature has the power to make provisions for the incorporation, regulation, and winding up of any cooperative society based on the principles of autonomous functioning and voluntary formation of the members other related factors.

The state legislature sets the number of directors to be there on the board of a cooperative society. It also gives directors to reserve one seat for SC/ST and two seats for women in every cooperative society.

inFocus

- State of the Education Report for India: Artificial Intelligence in Education
- Global Innovation Index 2022
- Preserving Progress on Nutrition in India: Poshan Abhiyan in Pandemic Times
- United in Science 2022

State of the Education Report for India: Artificial Intelligence in Education

On 20th September, 2022, United Nations Educational, Scientific and Cultural Organization (UNESCO) launched its fourth edition of State of the Education Report for India: Artificial Intelligence in Education – Here, There and Everywhere.

- The aim of this report is to advocate for and provide guidance towards the responsible and human-centred application of Artificial Intelligence in Education (AI in Education) in India by outlining its opportunities and challenges, and to offer advice to harness the former and to tackle the latter.

Major Findings

Artificial Intelligence in India

- The AI market in India is expected to reach US$7.8 billion by 2025 at the rate of 20.2 per cent compound annual growth rate (CAGR).
- It is also predicted that the AI software market in India will grow to US$6.4 billion in 2025, at the rate of 18.1 per cent CAGR.

AI Literacy in India

- AI literacy is becoming highly relevant in India since the AI market is the primary growth driver of the broader information technology (IT) and data science industry.
- Compared to other countries, India is well advanced in terms of AI literacy, which is illustrated, for example, by the fact that India has the highest relative AI skill penetration rate worldwide.
- The public policy think tank of the Government of India, NITI Aayog acknowledges the importance of AI literacy in India and sees it as a national priority. This is also reflected in the National Education Policy 2020.

Opportunities for India

- AI-powered education tools offer opportunities across various aspects of education, which are categorized here as formal and informal learning, teaching, evaluation, school management, as well as mapping and matching of skills.

Challenges

Governance and Accountability Issue

- Potential AI risks are not limited to the field of education but range from bias and discrimination, via an AI 'arms race' to a malicious superintelligence.
- All these significant risks need to be addressed, and they all relate to the challenge of governing AI.
- Accountability is another challenge related to the fact that AI systems are often more advanced than humans, and thus, to humans, their decisions may seem to arise from an opaque black box.

Issues Related to Resources and Infrastructure

- India largely lack the basic technological facilities required to adopt any modern AI in Education systems, students in tier-2 and tier-3 cities do not have access to the hardware required to access online classes from home.
- Besides hardware, all locations where AI in Education infrastructure is implemented also require human resources.
- AI in Education systems requires another resource, which is a large amount of energy, especially during the training phase, but also thereafter, to ensure permanent access.
- However, despite the potential, India lacks access to specialised compute and storage facilities which forms the backbone of AI.

Lack of Reliable Data

- The government has taken steps and initiatives to collect credible data but there is still a huge gap that exists between the actual data and what's collected by information systems.
- The National Academic Depository (NAD) is created with an objective to hold all academic awards, degrees, mark-sheets and certificates. But it the work is still under process, most institutes are not aware of it.

Artificial Intelligence in the National Education policy (NEP) 2020

- Launched in July 2020 , the NEP also emphasizes the integration of AI in education, acknowledging that 'India must also take the lead in preparing professionals in cutting-edge areas that are fast gaining prominence, such as Artificial Intelligence (AI), 3-D machining, big data analysis, and machine learning, in addition to genomic studies, biotechnology, nanotechnology, neuroscience, with important applications to health, environment, and sustainable living that will be woven into employability of the youth'.
- The NEP highlights several important areas in which the application of AI is mentioned. It recommends introducing courses related to AI at all levels of education to develop the skills required to meet the current demands of industry.
- In this regard, the policy recommends introducing computational thinking (CT) at a foundational stage of children's education, so that India plays a leadership role in the fields of Artificial Intelligence, machine learning and data science, among others.
- The NEP advocates the development of hardware and software that use Artificial Intelligence, machine learning, learning analytics, big data, blockchain, smart boards, adaptive systems, etc. to improve students' learning and to identify their learning paths.
- It goes on to advocate for developing AI-based software to track students through their years in school, based on their learning data, to provide information about students' strengths, weaknesses and areas of interest, and thus help students make decisions about the careers they choose.
- The NEP plans for Higher Education Institutions (HEIs) to offer postgraduate and Ph.D. programs in interdisciplinary domains that include machine learning and professional areas like healthcare, agriculture and law.
- A National Educational Technology Forum is being set up by the Ministry of Education to enhance learning, assessment, planning and administration for both school and higher education, in which AI will play an important role in making data-driven decisions.
- The NEP also highlights the importance of ethics in the development and deployment of AI based technologies.

Recommendations

- Consider the ethics of Artificial Intelligence in Education as an utmost priority;
- Rapidly provide an overall regulatory framework for Artificial Intelligence in Education;
- Create effective public-private partnerships;
- Ensure that all students and teachers have access to the latest technology;
- Expand AI literacy efforts;
- Attempt to correct algorithmic biases and the resulting discrimination;
- Improve public trust in Artificial Intelligence;
- Request the private sector to better involve students and educationists in developing AI products;
- Place ownership of data with the students; and
- Embrace the versatility of Artificial Intelligence in Education systems. ◼

Global Innovation Index 2022

On 29th September, 2022, the 15th edition of the Global Innovation Index (GII) was published by the World Intellectual Property Organization (WIPO), a specialized agency of the United Nations. The GII 2022 report was published by WIPO, in partnership with the Portulans Institute and with the support of its corporate partners including the Confederation of Indian Industry (CII), the Brazilian National Confederation of Industry (CNI), Ecopetrol (Colombia), and the Turkish Exporters Assembly (TIM).

- **GII 2022 Theme:** "What is the future of innovation-driven growth?"

Major Findings

Impact of Innovation

- Innovation investments thrived at the height of the COVID-19 pandemic and boomed in 2021.
- Investments in global R&D in 2020 grew at a rate of 3.3 percent, not falling, but slowing from the historically high 6.1 percent R&D growth rate recorded in 2019.
- IP filing activity grew during the global pandemic in 2020 and in 2021, too. International trademark filings – a good proxy for entrepreneurship – saw particularly strong growth in 2021, up by 15 percent.

An Exclusive Interview

with

Shraddha Shukla

Rajasthan Judicial Services Examination, 2021 (15th Rank)

C.S.C. : *Achieving top slot in the Judicial Services Examination is no small feat; accept our heartiest congratulations on your splendid success.*

Shraddha: Thank you.

C.S.C. : *Can you recall the exact moment when you realized the importance of Judicial Services?*

Shraddha: From childhood, law always fascinated me as a tool which keeps our social and individual interest in a harmony and when I thought of pursuing it as a career, I got to know about Judiciary and what all it stands for.

C.S.C. : *Finally, at what point of time did you make up your mind to make career in 'Judicial Services'?*

Shraddha: In my 10th Standard, I decided that I would pursue law and go for Judicial Services. Since no one in my family has ever pursued law and me being of State Board topper in senior secondary exam (science stream), everyone expected me to pursue engineering or medicine; but I was confident about my decision.

C.S.C. : *You must have read Toppers' interviews in newspapers/magazines; what inspired you the most? Any particular success story which has influenced your journey to this result?*

Shraddha: Yes, I do read toppers' interviews in newspapers/magazines and the thing that inspired me the most was their determination and hard work. One such story which inspired me was of Akanksha Tiwari Ma'am (Rank-1, UP Judicial Services 2018).

C.S.C. : *Was JSE a planned decision or your parents' wish? Did you keep in mind some time-frame for the preparation and number of attempts?*

Shraddha: It was my decision for which I had to convince my parents who were initially skeptical because I had no background in legal field but later on they firmly stood by me. I was not sure about the time-frame but I always desired to clear it in my very first attempt.

C.S.C. : *What was your first step when you were really serious about making a career in Judicial Services?*

Shraddha: As I had already decided my goal during school days, I embarked upon that path. I joined Banaras Hindu University for BA.LL.B (Hons.) and after that I joined Ambition Law Institute for my preparation.

C.S.C. : *Were you confident of your success in this examination and how did you react to this news of your success?*

Shraddha: I had a feeling that I would pass the exam but anxiety and fear before the result is a common tendency among all the aspirants. And after the results, it was like dream come true. I was filled with joy and my years of hard work had finally been paid off.

C.S.C. : *Were you preparing for other career opportunities as well while preparing for your ultimate goal i.e. Career in Judicial Services?*

Shraddha: No, I was not preparing for other career opportunities.

C.S.C. : *While the changing economic environment offers immense lucrative career opportunities in various sectors, still what kept you motivated towards Judicial Services?*

Shraddha: It was not a career opportunity for me but it was my dream to become a Judicial Officer which shaped my life accordingly; and I was not deviated by other things.

C.S.C. : *'Time Management' is a key factor while making preparations as well as in writing examination papers. Did you come across such a problem during this period? If yes, then how did you manage things?*

Shraddha: I used to divide the time to each subject according to its weightage in the examination. Mock papers helped me to overcome the problem of time management in writing mains.

C.S.C. : *List some of the magazines, newspapers, books, etc. which you read for 'General Studies' preparation.*

Shraddha: I referred Civil Services Chronicle, Indian Express, The Print, Live Law and Frontline.

Polity & Governance
- Revised National List of Essential Medicines 2022
- Centre Bans Export of Sensitive Maps and Geospatial Data
- Social Audit
- Panel setup for Cooperative Policy

- Election Symbols (Reservation and Allotment) Order 1968

Judiciary
- Article 142 and Complete Justice
- Supreme Court to Examine the Practice of Excommunication

Internal Security
- PFI Declared Unlawful Association under UAPA

Plans/Policies
- Draft Indian Telecommunication Bill 2022

Miscellaneous
- Swachh Survekshan Awards 2022

News Snippets

Polity & Governance

Revised National List of Essential Medicines 2022

On 13th September, 2022, the government published the revised National List of Essential Medicines (NLEM) 2022.
- The updated list has deleted 26 drugs from the previous one and added 34 drugs, increasing the list to 384 drugs.

Need
- The revisions are done keeping in mind the changing profile of diseases in the country, newer drugs becoming available in the market, drugs becoming obsolete or being banned for certain risks, and newer treatment protocols.

About National List of Essential Medicines (NLEM)
- Framed on the principles of the World Health Organisation's essential medicine list, **India's first list was developed in 1996.**
- It has since been modified four times – in 2003, 2011, 2015, and now in 2022.
- In NLEM, the medicines are categorized based on level of healthcare system as- **P- Primary; S- Secondary and T- Tertiary.**
- The drugs in NLEM are included in scheduled category and their price is regulated by the National Pharmaceutical Pricing Authority(NPPA).
- Once a drug is included in the NLEM, its prices are controlled by the central government and cannot be changed by companies themselves.

Criteria for inclusion of a Medicine in NLEM
- Useful in diseases which is a public health problem in India
- Licensed/ approved Drugs Controller General (India) (DCGI)
- Have proven efficacy and safety profile based on scientific evidence
- Comparatively cost effective and aligned with the current treatment guidelines
- Recommended under National Health Programs of India. (e.g. Ivermectin part of Accelerated Plan for Elimination of Lymphatic Filariasis 2018).
- When more than one medicine are available from the same therapeutic class, one prototype/ medically best suited medicine of that class to be included.

DRUGS LIST GETS A REJIG

▶ **Four major anti-cancer drugs** – bendamustine hydrochloride (leukemia), irinotecan HCl trihydrate (pancreatic cancer), lenalidomide (multiple myeloma), and leuprolide acetate (prostate and uterine cancer) – added to NLEM 2022

▶ **Insulin glargine and anti-diabetic drug** teneligliptin also included

▶ **Patented drugs dolutegravir** (anti-HIV), daclatasvir (Hepatitis C), and bedaquiline and delamanid (anti-TB) also part of the list

▶ **Common gastrointestinal** drug ranitidine removed

▶ **Disinfectants like bleaching powder** also taken off the list

Indian Society
- Conversion Therapy

Social Issues
- Nikah-Halala

Plans/Policies
- PM Schools for Rising India
- Studentship Program for Ayurveda Research Ken
- Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana

Reports
- Global Estimates of Modern Slavery
- Cost of Universalizing Early Childhood Education in India
- Sample Registration System Statistical Report 2020

News Snippets

Indian Society

Conversion Therapy

Recently, the National Medical Commission (NMC) has written to all State Medical Councils banning conversion therapy and calling it a "professional misconduct".

The NMC was following a Madras High Court directive to issue an official notification listing conversion therapy as a wrong, under the Indian Medical Council (Professional Conduct, Etiquettes and Ethics) Regulations, 2002.

About Conversion Therapy
- Conversion or reparative therapy is an intervention aimed at changing the sexual orientation or gender identity of an individual.
- It employs the use of psychiatric treatment, drugs, exorcism or even violence to make the individual a heterosexual.
- It also includes efforts to change the core identity of youth whose gender identity is incongruent with their sex anatomy.

Risks Involved

Ineffectiveness
- There is a scientific consensus that conversion therapy is ineffective at changing a person's sexual orientation or gender identity and that it frequently causes significant, long-term psychological harm in individuals who undergo it.
- The interventions under conversion therapy are provided under the false premise that homosexuality and diverse gender identities are pathological.

Health Issues
- Further, conversion therapy poses the risk of causing or exacerbating mental health conditions, like anxiety, stress and drug use which sometimes even lead to suicide.

Way Forward
- Schools and colleges must effect changes in curricula for a better understanding of the community.
- People of a different sexual orientation or gender identity often narrate harrowing tales of bullying, discrimination, stigma and ostracization.
- Gender-neutral restrooms should be compulsory in educational institutes and other places.
- Parents too need to be sensitised, because the first point of misunderstanding and abuse often begins at home, with teenagers being forced to opt for "conversion" therapies.
- Health professionals should refuse to conduct conversion therapy and should report colleagues who advertise or perform it to the authorities.
- National medical and mental health associations should take the appropriate steps to work with state authorities and governments to pass laws which ban conversion therapy.

MADRAS HIGH COURT ON CONVERSION THERAPY

- Prohibited any attempt to medically "cure" or change the sexual orientation of LGBTQIA+ (lesbian, gay, bisexual, transgender, queer, intersex, asexual or of any other orientation) people.
- Urged the authorities to take action against professionals involving themselves in any form or method of conversion therapy which could include the withdrawal of licence to practice medicine.
- Directed the police, for example, to close complaints of missing person cases without subjecting them to harassment if it found on investigation that the parties were consenting adults belonging to the LGBTQIA+ community.
- Directed the National Medical Commission to issue necessary official notification by enlisting 'Conversion Therapy' as a professional misconduct.

# Heritage Art & Culture

Indian History

Ambedkar Circuit

Recently, the government announced a special tourist train to cover the Ambedkar Circuit.

About Ambedkar Circuit
- The government had first proposed the Ambedkar Circuit, or Panchteerth, in 2016.
- The five cities in the tourist circuit as announced are Mhow, London, Nagpur, Delhi and Mumbai.

About the Sites
- **Janma Bhoomi:** Ambedkar's birthplace in Madhya Pradesh's Mhow.
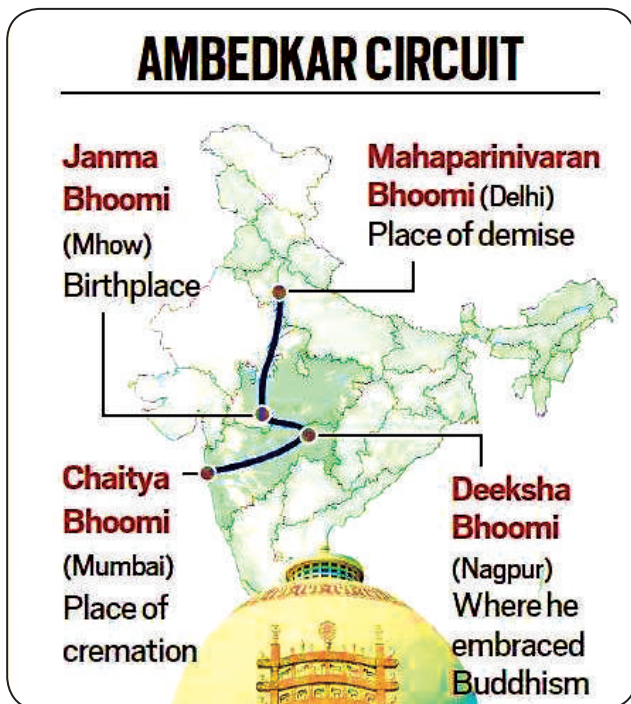
- **Shiksha Bhoomi**: The place in London where he stayed while studying in the UK.
- **Deeksha Bhoomi**: The place in Nagpur where he embraced Buddhism.
- **Mahaparinirvan Bhoomi**: The place of his demise in Delhi.
- **Chaitya Bhoomi**: The place of his cremation in Mumbai.

Reasons why BR Ambedkar Embraced Buddhism

Political Protest
- Ambedkar had for long demanded separate electorates for the untouchables, as a measure of protection against rule of the Hindu majority.
- After much agitation however, he yielded to give up on his demands in the Poona Pact of 1932, which was signed by Ambedkar along with Pandit Madan Mohan Malviya to break Gandhi's protest against the separate electorate demand.
- Several critics have been of the opinion that Ambedkar's conversion to Buddhism was a political protest, aimed at his frustration at being unable to get separate electorates for the untouchables.

Life Long Battle against Hinduism
- Ambedkar's first experience of caste-based segregation happened when he was in school.
- Since then he grew up battling the oppressions of the caste system at every stage of his life.
- As per Ambedkar, Hinduism had failed to secure basic human rights. The Hindu society does not give equality of treatment, but the same is easily achieved by conversion.

Buddhism as a Project of Modernity
- According to Ambedkar, "Buddha's dhamma is the best" and Buddhism was the "most scientific religion".
- By converting to Buddhism, he fulfilled one of the most basic requirements of attaining modernity- the exercise of individual choice based on reason and historical consciousness.

ECONOMY WATCH

Plans/Policies

National Logistics Policy

On17th September, 2022, the government released the National Logistics Policy. It seeks to address challenges faced by the transport sector and expedite the last-mile delivery while saving time and money for businesses.

Need for Logistic Policy
- **Highly Defragmented:** India's logistics sector is highly defragmented. Only, 10% of Indian logistics belongs to organized sector.
- **Huge Complexity:** India's logistics sector is very complex with more than 20 government agencies, 40 PGAs, 37 export promotion councils, 500 certifications, 10000 commodities, 160 billion market sizes.
- **High Logistic Cost:** The need for a national logistics policy was felt since the logistics cost in India is high as compared to other developed economies.

Aim
- To bring cost to single-digit
- To bring in an integrated and tech-enabled approach to logistics operations
- To bridge efficiency gap

Salient Features
Comprehensive Logistics Action Plan (CLAP)
- The Policy will be implemented through a Comprehensive Logistics Action Plan (CLAP).
- The interventions proposed under the CLAP are divided into eight key action areas-
  - ✓ Integrated Digital Logistics Systems
  - ✓ Standardisation of physical assets and benchmarking service quality standards
  - ✓ Logistics Human Resources Development and Capacity Building
  - ✓ State Engagement
  - ✓ EXIM (Export-Import) Logistics
  - ✓ Service Improvement framework
  - ✓ Sectoral Plan for Efficient Logistics
  - ✓ Facilitation of Development of Logistics Parks.

Integrated Digital Logistics Systems
- Develop a system of unified logistics interface to link multiple data sources and develop cross-sectoral use cases for logistics stakeholders.

Sectoral Plan for Efficient Logistics (SPEL)
- SPEL aligned with PM GatiShakti, will be developed for each sector with underlying philosophies of inter-operability, resiliency, sustainability, and innovation.

Integration of Digital System (IDS)
- Under this, 30 different systems of seven different departments will be integrated, including road transport, railway, customs, aviation, foreign trade and commerce ministries.
- These departments will have their own digital data which will be integrated under IDS. This is expected to improve shorter cargo movement

Unified Logistics Interface Platform (ULIP)
- Similar to IDS, this system will also be utilised for smooth cargo movement

Ease of Logistics (ELOG)
- Under this, the new policy will simplify the rules and the logistics business will be eased

System Improvement Group (SIG)
- This system will be used to monitor all logistics-related projects regularly and will facilitate the removal of any hurdle

Space Science

DART Spacecraft Successfully Crashes into Asteroid Dimorphos

Recently, NASA's Double Asteroid Redirection Test (DART) spacecraft successfully crashed into a distant asteroid Dimorphos at hypersonic speed in a test of the world's first planetary defence system. This was the first attempt to alter the motion of an asteroid or any celestial body.

• The mission was devised to determine whether a spacecraft is capable of changing the trajectory of an asteroid through sheer kinetic force, nudging it off course just enough to keep our planet out of harm's way.
• The DART team said it expects to shorten the orbital path of Dimorphos by 10 minutes but would consider at least 73 seconds a success.
• Whether the experiment succeeded beyond accomplishing its intended impact will not be known until further ground-based telescope observations of the asteroid next month.

DART: Mission Objectives
• Demonstrate a kinetic impact with Dimorphos.
• Change the binary orbital period of Dimorphos.
• Use ground-based telescope observations to measure Dimorphos' period change before and after impact.
• Measure the effects of the impact and resulting ejecta on Dimorphos.
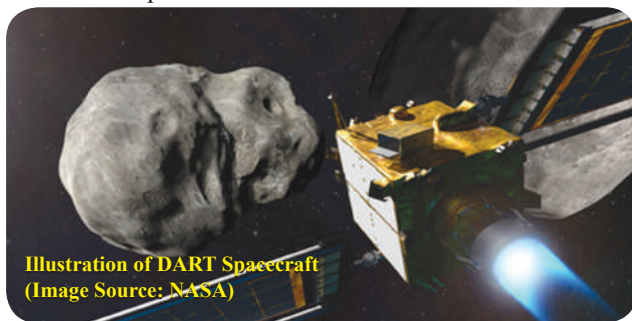
Illustration of DART Spacecraft (Image Source: NASA)

DART: Key Highlights
• **Launch:** Built and managed by the Johns Hopkins Applied Physics Laboratory (APL), DART was launched on 24th November, 2021, aboard a SpaceX Falcon 9 rocket from Vandenberg Space Force Base, California.
• **DART:** It was a low-cost spacecraft, weighing around 610 kg at launch and 550 kg during impact. The main structure was a box ($1.2 \times 1.3 \times 1.3$ metres). It had two solar arrays and used hydrazine propellant for maneuvering the spacecraft.
• **Didymos-Dimorphos:** DART's one-way trip was to the Didymos (Greek for "twin") asteroid system, which comprises a pair of asteroids. DART's target was the moonlet, Dimorphos (Greek for "two forms"), which is approximately 170 meters in diameter. The moonlet orbits Didymos - which is approximately 780 meters in diameter - every 11 hours and 55 minutes.
• The asteroid and the moonlet do not pose any threat to Earth.
• **DRACO:** DART's single instrument, the Didymos Reconnaissance and Asteroid Camera for Optical navigation (DRACO), provided first images from the spacecraft.
• **SMART Nav:** A sophisticated guidance, navigation, and control system, working together with algorithms called Small-body Maneuvering Autonomous Real Time Navigation (SMART Nav), enabled the DART spacecraft to identify and distinguish between the two asteroids.
• **LICIACube:** It stands for Light Italian CubeSat for Imaging of Asteroids. A CubeSat that rode with DART and provided by the Italian Space Agency (ASI), it was released prior to DART's impact to capture images of the impact and the resulting cloud of ejected matter.

Why Didymos?
• Didymos was a perfect system for the test mission because it is an eclipsing binary which means it has a moonlet that regularly orbits the asteroid and we can see it when it passes in front of the main asteroid.

ECOLOGY & ENVIRONMENT

Biodiversity

India and the US Launch "Trees Outside Forests in India"

Recently, the Ministry of Environment, Forest and Climate Change, Government of India and the US Agency for International Development (USAID) announced the launch of a new program, "Trees Outside Forests in India."

USAID's forestry activities in India support important priorities of the US and Indian governments, contributing to the Forestry Pillar of the Climate Action and Finance Mobilization Dialogue in support of the US-India Climate and Clean Energy Agenda 2030 Partnership.

Key Points
- **Objective:** The program will expand tree coverage outside of forest lands to enhance carbon sequestration, support local communities, and strengthen the climate resilience of agriculture, thereby supporting global climate change mitigation and adaptation goals.
- **Implementation:** Implemented by a consortium led by the Center for International Forestry Research (CIFOR) and World Agroforestry (ICRAF), the program will be undertaken in seven states including Andhra Pradesh, Assam, Haryana, Odisha, Rajasthan, Tamil Nadu, and Uttar Pradesh.
- The new $25 million program will bring together farmers, companies, and private institutions in India to rapidly expand tree coverage outside of traditional forests by 28 lakh hectares.
- **Agroforestry:** Through agroforestry, or integrating trees into farming systems, the program will improve the resilience of farming systems while increasing the income of farmers.
- **Financing Models:** The program will use innovative financing models and leverage India's private sector to promote tree-based enterprises. This will help create sustainable markets and improve rural economies and livelihoods with the potential to benefit more than 13 million people.

Significance
- As one of the world's largest economies and a global leader in science and innovation, India plays a critical role in helping solve the climate crisis.
- This new program builds on the enduring US-India partnership to tackle the climate crisis by enhancing carbon sequestration and bolstering resilience in the face of climate threats and extreme weather events.
- India's achievements on these issues can provide models for the world.

Study on Poaching of Sea Turtles

According to a recent study, more than 1.1 million sea turtles have been illegally killed and in some cases trafficked from 1990 to 2020. Over 44,000 turtles were targeted annually over the last decade.

Illegal killing and trafficking of animals and plants pose a serious threat to wildlife biodiversity. The black market wildlife trade is considered to be one of the most lucrative illicit industries in the world.

Key Highlights
- **Decline in Poaching:** There has been a decline of 28 per cent in the poaching of marine creatures. The decline over the past decade could be due to increased protective legislation and enhanced conservation efforts, coupled with an increase in awareness of the problem or changing local norms and traditions.
- **Exploitation:** The reptiles faced exploitation in 65 countries/territories and 44 out of the 58 marine turtle regional management units (RMUs) in the world despite laws protecting the creatures.

- 22nd SCO Summit
- Ministerial Meeting of India-Saudi Arabia Strategic Partnership Council
- 19th ASEAN-India Economic Ministers' Meeting
- 7th Eastern Economic Forum

Miscellaneous

- 47th AIBD Annual Gathering / 20th AIBD General Conference

News Snippets

International Relations

- India-Japan 2+2 Foreign and Defence Ministerial Meeting

International Relations

India-Japan 2+2 Foreign and Defence Ministerial Meeting

On 8th September, 2022, India's Defence Minister and External Affairs Minister, along with their Japanese counterparts, held the second India-Japan 2+2 Foreign and Defence Ministerial Meeting in Tokyo.

Key Highlights

- **Global Cooperation:** Acknowledging that global cooperation is required more than ever to address security challenges that have become more acute, both sides reaffirmed their commitment to a rules-based global order that respects sovereignty and territorial integrity of nations.
- They emphasized the need for all countries to seek peaceful resolution of disputes in accordance with international law without resorting to threat or use of force or any attempt to unilaterally change the status quo.
- **Indo-Pacific:** Both sides reiterated their commitment to a common strategic goal of achieving a free and open Indo-Pacific, that is inclusive and resilient, based on the rule of law and free from coercion.
- The Ministers also reiterated their strong support for ASEAN's unity and centrality and their full support for the "ASEAN Outlook on the Indo-Pacific (AOIP)" which upholds the principles such as the rule of law, openness, freedom, transparency and inclusiveness.
- **Security Challenges:** With respect to regional and global security challenges, they strongly reaffirmed their commitment towards "Partnership for a Peaceful, Stable and Prosperous Post-COVID World".
- **Security and Defence Cooperation:** Acknowledging Japan's determination to reinforce its defence capabilities, India expressed its support to work towards enhanced security and defence cooperation.
- Defence cooperation constitutes an important pillar of the India-Japan Special Strategic and Global Partnership.
- The Ministers concurred to launch the Joint Service Staff Talks between the Japan Joint Staff and the Indian Integrated Defence Staff.
- **Defence Equipment and Technology:** India and Japan acknowledged the vast potential for the two countries to expand bilateral cooperation in the areas of defence equipment and technology cooperation.
- **Defence Exercises:** The Ministers welcomed the participation of Japan for the first time in the multilateral exercise MILAN and the operationalization of the Agreement Concerning Reciprocal Provision of Supplies and Services between the Self-Defense Forces of Japan and the Indian Armed Forces in the exercise.
- Both sides expressed their commitment to continuing bilateral and multilateral exercises including "Dharma Guardian", JIMEX and "Malabar." They also expressed their shared intention to make continuous efforts towards more complex and sophisticated bilateral exercise.
- **Maritime Cooperation:** Acknowledging the potential of the Information Fusion Centre - Indian Ocean Region, the Ministers looked forward to actively deepening multilateral coordination with liaison officers of other countries in the forum for enhanced maritime cooperation.
- **Dialogues:** Recognizing the importance of multilayered dialogues between the two countries, they looked forward to having dialogues at an early date in areas such as Security Council reform with a view to strengthening the functions of the UN as a whole. They also acknowledged the importance of enhancing dialogues in the field of economic security.

22nd SCO Summit

On 15th and 16th September, 2022, the 22nd Meeting of the Shanghai Cooperation Organization (SCO) Council of Heads of State was held in Samarkand, Uzbekistan. After the summit, Uzbekistan handed over the rotating presidency of the SCO to India.

STATE WATCH

Andaman & Nicobar Islands

India's First Swachh Sujal Pradesh

- The Union Jal Shakti Ministery declared Andaman and Nicobar Islands as India's first Swachh Sujal Pradesh.
- Now, Andaman and Nicobar Islands will also be known as India's first "Clean and Sujal Pradesh".
- All the villages of the state have been certified as 'Har Ghar Jal' and 'ODF Plus'.
- There are namely three important components of Sujal and Swachh state:
- Safe and secure drinking water supply and management
- ODF Plus: ODF Sustainability and Solid and Liquid Waste Management (SLWM)
- Cross-cutting interventions like convergence, IEC, action planning, etc.

Uttar Pradesh

Bhartaul: First Village in State to have RO Water in Every Household

- Bhartaul, Bithiri Chainpur block of Bareilly, has become the first village in Uttar Pradesh to achieve the distinction of supplying RO water to every household.
- It has around 7,000 people and every household is provided with clean and safe RO water. The installation of RO has been under the Adarsh Gram Panchayat initiative enabling the Village to get access to clean drinking water.

Chunar Logistics Park

- It will be built in Mirzapur district. The Project will meet the business needs of Eastern UP and adjoining areas.
- It will also play an important role in promoting rail freight transportation and reduce logistics cost and transit time, thereby giving a fillip to the local carpet and handicrafts industry.

Ayushman Utkrishta Award 2022

- Uttar Pradesh was awarded the 'Ayushman Utkrishta Award 2022' at the Aarogya Manthan programme for adding various facilities to the National Health Facility Register. UP was the best performing state in the nation after it added 28,728 new health facilities to the National Health Facility Register.
- Karnataka ranks second with 23,838 healthcare facilities, followed by Andhra Pradesh (13,335), Maharashtra (12,902), Bihar (12,453); Madhya Pradesh (12,268); West Bengal (11,607), Chhattisgarh (9,349), Telangana (7,988), and Gujarat (7,791).

Farrukhabad 'jail ka khana' gets 5-star FSSAI Rating

- The Fatehgarh Central jail in Uttar Pradesh's Farrukhabad district has earned five-star rating from the Food Safety Standards Authority of India (FSSAI) for the quality of food it serves to inmates.
- It is a recognition of food quality and hygiene, which means the inmates are getting quality food items prepared in jail.

Delhi

Delhi Model Virtual School

- It is India's first virtual school affiliated by the Delhi Board of School Education.
- It has been launched for children who cannot go to school physically for any reasons.
- It has been developed by Google and School Net India.
- It will be used for preparing students for competitive exams like JEE, NEET and CUET.

Public Policies & Welfare Schemes

In this special section, we have come up with comprehensive content on 'Public Policies and Welfare Schemes'. This is an important section of the UPSC syllabus as every year, many questions are asked from it. The policy inputs/ guidelines are directly asked in the Preliminary examination. Also, it forms an important aspect of answer writing. Based on an analysis of the previous years' Civil Services Preliminary examination question papers, the following aspects of each scheme have been incorporated:

Launch Date, Nodal Agency, Objectives, Target Groups, Key Features/Guidelines, Significance/Impact/Implications, and Concern Areas.

Apart from factual content, a brief analytical overview has also been included for the benefit of our readers.

SOCIO-ECONOMIC DEVELOPMENT

Education, Women and Child Development

Rural Development

Social Justice and Empowerment

Health & Family Welfare

Public Policies & Welfare Schemes

ECONOMY

SCIENCE & TECHNOLOGY

ECOLOGY & ENVIRONMENT

Socio-economic Development

Education, Women and Child Development

Strengthening Teaching-Learning and Results for States (STARS) Project

> **Launch Date:** 14th October 2020 (Performance of STARS was reviewed recently)
> **Nodal Agency :** Ministry of Education (aided by World Bank)

Objectives: It envisions improving the overall monitoring and measurement activities in the Indian School Education System through interventions.

Target Groups: It covers 6 States i.e., Himachal Pradesh, Rajasthan, Maharashtra, Madhya Pradesh, Kerala and Odisha. It targets students of age group of 6-17 years (approx. 250 million); 1.5 million schools; and approximately 10 million teachers.

Rationale/Context
- India has, over the years, made significant strides in improving access to education across the country.
- Between 2004-05 and 2018-19, the number of children going to school increased from 219 million to 248 million.
- However, the learning outcomes of students across all age groups continue to remain below par.

Key Features/Guidelines
- It is a Centrally Sponsored Scheme.
- It is aligned with the objectives of National Education Policy (NEP) 2020 of Quality Based Learning Outcomes.
- It includes a Contingency Emergency Response Component (CERC).

Expected Impacts/Significance and Implications
- **Impacts and Significance**
  - ✓ Increase in students achieving minimum proficiency in grade 3 language in selected states.
  - ✓ Improvement in secondary school completion rate.
  - ✓ Improvement in governance index scores.
  - ✓ Strengthened learning assessment systems.
  - ✓ Partnerships developed to facilitate cross-learning between states.
- **Implication**
  - ✓ Improvement in the State level service delivery such as strengthening planning and management capacities for decentralized management by training of Block Resource Centres (BRCs) and Cluster Resource Centres (CRCs).
  - ✓ Strengthened school management by training of Head Teachers and Principals for improved education service delivery.

Concern Areas
- Similar programs in the past have not resulted desired results.
- Overlapping of programs such as PM e-Vidya, Foundational Literacy and Numeracy Mission, etc.
- Measurable outcomes/quantifiable results are a concern.

---

2 LEVELS OF IMPLEMENTATION

1. National Level
- Strengthening Ministry of Education's national data system to capture robust and authentic data on retention, transition and completion rates of students.
- Strengthening of learning assessment system.
- Establishing a National Assessment Centre (PARAKH) for continuous tracking of learning and data-driven decision making leading to examination reforms.

2. State Level
- Strengthening Early Childhood Education and Foundational Learning.
- Strengthening classroom instruction, Vocational education.
- Governance and decentralized management for Improved Service Delivery.
- Strengthening Vocational educational in schools through mainstreaming, career guidance and counselling, internships and coverage of out of school children.